

that supplies analyses and summaries of data, uses mathematical models to make forecasts and recommendations, and provides the means by which alternative policies and programs may be efficiently considered. An effective BMS should include, as a minimum, formal procedures for:

- (a) Collecting, processing, and updating data;
- (b) Predicting deterioration;
- (c) Identifying alternative actions;
- (d) Predicting costs;
- (e) Determining optimal policies;
- (f) Performing short- and long-term budget forecasting; and
- (g) Recommending programs and schedules for implementation within policy and budget constraints.

§ 500.108 SMS.

An SMS is a systematic process with the goal of reducing the number and severity of traffic crashes by ensuring that all opportunities to improve highway safety are identified, considered, implemented as appropriate, and evaluated in all phases of highway planning, design, construction, maintenance, and operation and by providing information for selecting and implementing effective highway safety strategies and projects. The development of the SMS may be based on the guidance in "Safety Management Systems: Good Practices for Development and Implementation."³ An effective SMS should include, at a minimum:

- (a) Communication, coordination, and cooperation among the organizations responsible for the roadway, human, and vehicle safety elements;
- (b) A focal point for coordination of the development, establishment, and implementation of the SMS among the agencies responsible for these major safety elements;
- (c) Establishment of short- and long-term highway safety goals to address identified safety problems;
- (d) Collection, analysis, and linkage of highway safety data;

- (e) Identification of the safety responsibilities of units and positions;
- (f) Public information and education activities; and

- (g) Identification of skills, resources, and training needs to implement highway safety programs.

§ 500.109 CMS.

(a) For purposes of this regulation, congestion means the level at which transportation system performance is no longer acceptable due to traffic interference. The level of system performance deemed acceptable by State and local officials may vary by type of transportation facility, geographic location (metropolitan area or subarea, rural area), and/or time of day. An effective CMS is a systematic process for managing congestion that provides information on transportation system performance and on alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet State and local needs. The CMS results in serious consideration of implementation of strategies that provide the most efficient and effective use of existing and future transportation facilities. In both metropolitan and non-metropolitan areas, consideration needs to be given to strategies that reduce SOV travel and improve existing transportation system efficiency. Where the addition of general purpose lanes is determined to be an appropriate strategy, explicit consideration is to be given to the incorporation of appropriate features into the SOV project to facilitate future demand management and operational improvement strategies that will maintain the functional integrity of those lanes.

(b) In addition to the criteria in paragraph (a) of this section, in all TMAs, the CMS shall be developed, established and implemented as part of the metropolitan planning process in accordance with 23 CFR 450.320(c) and shall include:

- (1) Methods to monitor and evaluate the performance of the multimodal transportation system, identify the causes of congestion, identify and evaluate alternative actions, provide

20001. Available for inspection as prescribed in 49 CFR part 7, appendix D.

³ *Safety Management Systems: Good Practices for Development and Implementation*, FHWA and NHTSA, May 1996. Available for inspection and copying as prescribed in 49 CFR part 7, appendix D.